

Amendments to the Claims

This listing of claims will replace all prior versions, and listing, of claims in the application.

1. (Currently amended) An array substrate comprising:

a transparent substrate including a display region that displays an image, a peripheral region having a driving circuit for displaying an image through the display region, and a sealine region that surrounds the display region to define the display region and the peripheral region;

a first insulation layer formed over the transparent substrate, the first insulation layer having an opening window in the sealine region;

a pixel electrode formed on the first insulation layer of the display region; and

a second insulation layer that is disposed between the first insulation layer and the transparent substrate, wherein the opening window extends through the first insulation layer to the second insulation layer, and comprises

wherein at least one intermediate portion of the first insulation layer is disposed at an inside of the opening window on the second insulation layer, and separated from the first insulation layer, positioned in between the interior edges of the opening window wherein the at least one intermediate portion consists primarily of the first insulation layer.

2. (Canceled).

3. (Original) The array substrate of claim 1, wherein the first insulation layer corresponds to an organic layer.

4. (Canceled).

5. (Previously presented) The array substrate of claim 1, wherein the second insulation layer corresponds to a silicon nitride layer (SiN_x).

6. (Original) The array substrate of claim 1, further comprising a switching device having a gate electrode, a drain electrode that is electrically connected to the pixel electrode and a source electrode, a gate line that is electrically connected to the gate electrode, and a data line that is electrically connected to the source electrode, wherein a portion of the data line overlaps with the pixel electrode.

7. (Currently amended) A liquid crystal display apparatus comprising:
an array substrate including:

a transparent substrate including a display region that displays an image, a peripheral region having a driving circuit for displaying an image through the display region, and a sealine region that surrounds the display region to define the display region and the peripheral region;

a first insulation layer formed over the transparent substrate, the first insulation layer having an opening window in the sealine region;

a pixel electrode formed on the first insulation layer of the display region; and

a second insulation layer that is disposed between the first insulation layer and the transparent substrate, wherein the opening window extends through the first insulation layer to the second insulating layer, and comprises

wherein at least one intermediate portion of the first insulation layer is disposed at an inside of the opening window on the second insulation layer, and separated from the first insulation layer, positioned in between the interior edges of the opening window wherein the at least one intermediate portion consists primarily of the first insulation layer;

a color filter substrate facing the array substrate;
a liquid crystal layer interposed between the array substrate and the color filter substrate; and
a sealing member formed at the opening window to bond the array substrate and the color filter substrate.

8. (Canceled).

9. (Original) The liquid crystal display apparatus of claim 7, wherein the first insulation layer corresponds to an organic layer.

10. (Canceled).

11. (Previously presented) The liquid crystal display apparatus of claim 7, wherein the second insulation layer corresponds to a silicon nitride layer (SiNx).

12. (Original) The liquid crystal display apparatus of claim 7, further comprising a switching device having a gate electrode, a drain electrode that is electrically connected to the pixel electrode and a source electrode, a gate line that is electrically connected to the gate electrode, and a data line that is electrically connected to the source electrode, wherein a portion of the data line overlaps with the pixel electrode.

13. (Currently amended) A method of forming an array substrate, comprising:
forming a first insulation layer over the transparent substrate including a display region that displays an image, a peripheral region having a driving circuit for displaying an image through the display region, and a sealine region that surrounds the display region to define the display region and the peripheral region;

forming a second insulation layer between the first insulation layer and the transparent substrate;

removing a portion of the first insulation layer to form an opening window in the sealine region, the opening window extending through the first insulation layer to the second insulation layer, wherein ~~the opening window comprises at least one intermediate portion is disposed at an inside of the opening window on the second insulation layer, and separated from the first insulation layer, of the first insulation layer positioned in between the interior edges of the opening window~~ wherein the at least one intermediate portion consists primarily of the first insulation layer; and

forming a pixel electrode on the first insulation layer of the display region.

14. (Canceled).

15. (Original) The method of claim 13, wherein the first insulation layer corresponds to an organic layer.

16. (Canceled).

17. (Previously presented) The method of claim 13, wherein the second insulation layer corresponds to a silicon nitride layer (SiN_x).

18. (Currently amended) A method of forming a liquid crystal display apparatus, comprising:

forming an array substrate including i) a transparent substrate including a display region that displays an image, a peripheral region having a driving circuit for displaying an image through the display region, and a sealine region that surrounds the display region to

define the display region and the peripheral region, ii) a first insulation layer formed over the transparent substrate, the first insulation layer having an opening window in the sealine region, iii) a pixel electrode formed on the first insulation layer of the display region, and iv) a second insulation layer that is disposed between the first insulation layer and the transparent substrate, wherein the opening window extends through the first insulation layer to the second insulation layer, ~~and comprises wherein~~ at least one intermediate portion is disposed at an inside of the opening window on the second insulation layer, and separated from the first insulation layer, of the first insulation layer positioned in between the interior edges of the opening window wherein the at least one intermediate portion consists primarily of the first insulation layer;

forming a sealing member at the opening window;

attaching a color filter substrate to the sealing member to assemble the array substrate to the color filter substrate; and

forming a liquid crystal layer between the array substrate and the color filter substrate.

19. (Canceled).

20. (Original) The method of claim 18, wherein the first insulation layer corresponds to an organic layer.

21. (Canceled).

22. (Previously presented) The method of claim 18, wherein the second insulation layer corresponds to a silicon nitride layer (SiN_x).

23. (Previously Presented) The liquid crystal display apparatus of claim 7, wherein the liquid crystal layer is injected between the array substrate and the color filter substrate by a vacuum injection method.

24.-25. (Canceled).

26. (Previously presented) The liquid crystal display apparatus of Claim 1 wherein a height of the at least one intermediate portion is substantially the same as a height of the interior edges of the window opening.

27. (Previously presented) The liquid crystal display apparatus of Claim 7 wherein a height of the intermediate portion is substantially the same as a height the interior edges of the window opening.

28. (Previously presented) The method of Claim 13 wherein a height of the at least one intermediate portion is substantially the same as a height of the interior edges of the window opening.

29. (Previously presented) The method of Claim 18 wherein a height of the at least one intermediate portion is substantially the same as a height of the interior edges of the window opening.

30. (New) The array substrate of Claim 1, wherein the at least one intermediate portion consists of an insulation material.

31. (New) The array substrate of Claim 1, wherein the first insulation layer in the at least one intermediate portion contacts the second insulation layer.